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Impact Of Problematic Internet Gaming On Achievement Motivation Among University Students: Moderating Role Of Education

Amna Rasheed, Dr. Sadaf Ahsan, Dr. Sobia Masood

Department Of Psychology, Foundation University Rawalpindi Campus, Pakistan.
National Institute of Psychology, Quaid-i-Azam University, Islamabad, Pakistan.

Abstract

Indulgence of adolescents in internet gaming can have adverse effect on their motivation for academic achievement that in turn influences their social life. Thus, present research was designed to examine the effect of problematic internet gaming on achievement motivation. Furthermore, education was also explored as a moderator between the relationship of problematic internet gaming and achievement motivation among students of universities. Through purposive sampling technique, the sample of 300 students was collected from different Rawalpindi and Islamabad universities. The participant's age range was 18-35 years (M = 21.46, SD = 2.75). The measures administered were self-report i.e., Internet Gaming Disorder Scale-short form (Pontes & Griffiths, 2015) and Achievement Motivation Inventory (Muthee & Thomas, 2009). Results generated revealed that problematic gaming on internet predicted negatively achievement motivation among university students. Internet gaming was reported to be high among male students as compared to female students. Comparative to female students, male students showed lower levels of achievement motivation. Education worked as a moderator between the relationship of internet gaming and achievement motivation. Students of undergraduate level were determined to be more internet gaming addicts than graduate and postgraduate students. This study will be helpful for introducing intervention plans to enhance the achievement motivation of students by encouraging them to come out of the gaming world and start their social lives.

Keyword. Internet gaming, achievement motivation, gender, education, university students

Introduction

The rise in computer gaming have been stated to be a part of individual's living (Park & Ahn, 2010; Sun et al., 2008) and the number of adolescents involved in gaming disorder is rising globally (Chan & Vorderer, 2006) Researchers revealed that internet gaming or uncontrolled computer gaming are defined as an frequent, extreme and constant connection with computer games and video gaming that are uncontrollable, besides its linked problems (Griffiths & Wood, 2000; Lemmens et al., 2009). Prevalence has shown that in developed countries it increased by 239% (International Telecommunication Union, 2012). The difference reported in the estimates of prevalence ranges in USA from 0.3% (Aboujaouded et al., 2006) in Great Britain to 18.3% (Niemz et al., 2005). This massive technology-driven interrelationship is corresponding to a rise in research signifying that extreme usage of internet can cause to symptoms that are connected with addiction or behavioral problems (Ko et al., 2009; Leung & Lee, 2012; Young, 2010). People for many reasons play video games or gamble, which includes relaxation, capability, independence, and find an escape from their daily life concerns as playing produces "flow" states, which keeps the focus of the player, he has a sense of control and is

expected to even lose the sense of time and place, also finds playing games to be essentially satisfying (Gentile et al., 2011). As claimed by Weinstein, (2010) that video gaming and computer addiction may direct them towards long-term effects such as substance addiction and people addicted to games thus may become isolated from other people. For people with possible addiction of internet usage have psychosomatic problems component of physiological symptoms, physiological dysfunction and destabilized immunity (Cao et al., 2011), although psychological symptoms with maximum notable features may consist of anxiety and depression (Yen et al., 2007).

People engaged in an activity differ in the type of motives they possess. Motivation level varies from person to person (Huffman, 2007). Achievement motivation defined as determination about oneself to achieve whatever activities in which a person involves himself/herself, either it is educational task, sports event or occupational work (Tella, 2007). As observed by Gasinde (2000) that the need for achievement varies from person to person, the need may be higher in few persons and lower in others. Motivation is basic for understanding individual's behavior. Individuals may be extrinsically or intrinsically motivated. The intrinsic motivation is extracted within the job, whereas extrinsic motivation is considered as encouragements or awards that an individual appreciate after the completion of task (Mangal, 2000). Various studies conducted on achievement motivation revealed that for performance or for competition participation, achievement motivation is the most significant predictor (Huschle et al., 2008; Carey et al., 2000). A study by Atkinson and Feather (1966) revealed that individual's behavior concerned with achievement can be categorized into three parts: first part states person's tendency towards achievement, while second part considers the likelihood of achievement, and the third part is perception of the individual of giving value to the task. While McClelland (1961) revealed that achievement motivation is of two kinds of which one seems about by avoiding failures while other by optimistic aim of achieving success.

The Yee Model of Online Gaming Motivation (2006) states that there are three broad motives named socialization, immersion, and achievement. Nevertheless, in the achievement motivation gamers who tend to possess achievement motivation are prone to hunt for excellence in gaming, struggle and seeking control in gaming. According to a research, achievement motivation appears as powerful analyst of online problematic games than socialization (Yee, 2007). A qualitative study conducted by Chin-Sheng and Chiou, (2007) demonstrated that adolescents may have shelter in online games to practice control in the computer-generated world, avoiding the real world, thus, by means of online gaming tend to satisfy unattained psychological needs which includes power motive and achievement. On the other hand (Yee, 2007) it was stated that problematic online games motives differ from non-problematic online games. A study conducted in Pakistan found that excessive internet usage hindered with the student's academic performance which cause to reduce their social activities (Asdaque er al., 2010). Gender differentiation is also being reported among causes of online game playing. As concluded by Yee, (2006) that boys tend to possess noteworthy high level of achievement motives whereas girls have high level of socialized motive for online games playing.

Entertainment Software Association (2010) has observed that males altogether build up 60% of the gaming population. Age and gender are essential aspects of gaming addiction of computer, choice of genres, and computer gaming usage time (CGUT) (Xu et al., 2012). Gaming addiction confirmed to be more among men and boys (Chou & Tsai, 2007; Griffiths et

al., 2004; Hartmann & Klimmt, 2006; Quaiser-Pohl et al., 2006; Walther et al., 2012) and in comparison to women and girls, boys and men spend extra time on computer gaming (Chou & Tsai, 2007; Festl et al., 2013; Witt et al., 2011). Addiction towards pathological games and playing games increasingly are expected to be more among male adolescents as compared to female adolescents (Gentile, 2009; Ko et al., 2005). Thus, different behaviors are witnessed among girls and boys about gaming use. Girls are not expected to play less games on the whole but when they play, they spend less amount of time on games as compared with boys (Bickham et al., 2003; Lee et al., 2009). Similar differences on the basis of gender were observed when investigating pathological gaming which concluded that in comparison to girls, boys expected to show more symptoms of pathological games (Gentile, 2009; Grusser et al., 2005).

According to a study regarding internet addiction carried out in Pakistan in which game addiction was classified as a subtype of internet addiction (Ali, 2005) which later found support along with the western literature (Kiraly et al., 2014). Suhail and Bargees, (2006) concluded that in case of Pakistan, different domains of life are affected due to excessive use of internet such as education, physical health, psychological health, and social relationships. In another study (Niaz, 2008), it was concluded that many problems among the Pakistani people are arising due to internet addiction and mobile usage leading to problems such as depression, loneliness, and suicidal obsessions. Ansari and Stock, (2010) considered that altering patterns of interpersonal communication owing to internet, and research contains conclusion that internet usage can promote more loneliness and individualism. Study by Nalwa and Anand, (2003) acknowledged the excessive use of internet direct towards other problems like procrastination and loss of sleep.

The purpose of this research was to figure out the effect of problematic internet gaming on achievement motivation among students of universities with education as a moderator. The present research focuses to complete the research gap of previous studies defining in Pakistan the occurrence of internet gaming. In Pakistan the growing pathological use of internet gaming causing addiction among university students which is affecting their achievement motivation with lack of research in this respect stand as a base for current research.

Past western researches showed that addiction of video game is linked to low performance at school (Chiu et al., 2004; Choo et al., 2010; Rehbein et al., 2010; Skoric et al., 2009). However in Pakistan the study conducted on internet gaming was about how online multiplayer games can lead to problematic or non-problematic online behavior (Muqtadir, 2016). In Pakistan the addiction to internet or mobile can cause public health problems (Niaz, 2012). A study conducted in Pakistan revealed that in academic settings achievement motivation plays a vital role (Qadri & Nadu, 2017). Another research in Pakistan revealed that internet use tends to be higher in male as compared to females (Saleem et al., 2015). Thus previous Pakistani researches were dealing with internet gaming and achievement motivation independently. However focusing how internet gaming can have an impact on achievement motivation among university students is not yet studied in Pakistan, in order to address the gap, this study was conducted. This study dealt with a broader perspective, as research framework also included moderating role of education, as for university students this is the time period when they are independent and have less parental supervision so they may indulge in behaviors which might harm them. An increased usage of internet effects various domains of life among university students in Pakistan e.g., physical health, educational, psychological health and social relationships (Suhail & Bargees, 2006). This study shows that

problematic internet use can effect student's life whether it is social, psychological or educational, for students achievement motivation plays an important role in their life but how internet gaming could affect achievement motivation level among university students has been focused less.

This research will prove to be beneficial to gain a better understanding that how internet gaming will cause problem in the life of an individual and how it could affect the achievement motivation level among university students. Moreover, this study can be used by psychologist and researchers to further develop better intervention plans in order to overcome this ongoing increasing issue among university students in Pakistan.

Objective

The study was conducted to fulfill the following objectives;

1. To determine the effect of problematic internet gaming on achievement motivation among students of universities.
2. To find out the differences in problematic internet gaming and achievement motivation on the basis of demographics variables (i.e. gender & education) among students of universities.
3. To determine the role of gender and education as a moderator between the relationship of problematic internet gaming and achievement motivation among students of universities.

Hypotheses

1. Problematic internet gaming will predict achievement motivation negatively among university student.
2. Problematic internet gaming will be more among male students comparative to female students.
3. Achievement motivation will be less among male students relative to female students.
4. Problematic internet gaming will be more in undergraduate students as compared to graduate and postgraduate students.

Method

Research Design

The present study used quantitative approach. Cross-sectional research design was used to conduct this research. Data was collected by purposive sampling technique. The measures used in this research were self-report.

Sample

The data collection for current study was done from different private/government universities of Rawalpindi and Islamabad including Foundation University Rawalpindi Campus, NUST Islamabad, Fatima Jinnah University Rawalpindi and Millennium College University Islamabad. The sample was comprised of 300 university students (149 males, 151 females). Age range of the participants was from 18-35 years (M=21.46, SD=2.75). Participants who were indulged in playing games over the period of 12 months on a laptop or computer both online/offline were included in this research.

Measures

Internet Gaming Disorder Scale-Short Form (IGDS-SF; Pontes & Griffiths, 2015). The IGDS9-SF was originally derived from Pontes and Griffiths (2014) Internet Gaming Disorder Test (IGD-20 Test) which is a 5-point Likert scale with the answer classification ranging from never (1) to very often (5) consisted of 9 items. The score ranges from 9 – 45 (minimum to maximum) with high score depicting high level of gaming disorder. The IGDSF-S9 cut off was 36 (out of 45) to differentiate between individuals who are disordered gamers from individuals who are non-

disordered gamers. Satisfactory alpha coefficient (α = .87) has been reported for IGDS9-SF by original authors (Pontes & Griffiths, 2015).

Achievement Motivation Inventory (AMI; Muthee & Thomas, 2009). This was developed by Muthee and Thomas, (2009). The scale has 32 items, in which 18 items (3, 4, 5, 6, 11, 13, 14, 16, 17, 20, 23, 24, 26, 28, 29, 30, 31 & 32) are positive items and 14 items (1, 2, 7, 8, 9, 10, 12, 15, 18, 19, 21, 22, 25, & 27) are negative. The items were measured on a 5-point Likert scale ranging from (1) completely disagree to (5) completely agree. The high score of the scale indicates achievement motivation of high level while low scores showed achievement motivation of lower level. The Cronbach's alpha for the scale reported by original authors was α =.75 (Muthee & Thomas, 2009).

Procedure

The data collection process was approved by the departmental head of respective authorities. Participants were individually approached at universities or home and were informed about the present research. It was assured to participants that their information will be used for research purpose only. Only those students were included in the research who showed their willingness for participation and forms of informed consent were signed by the participants before the administration of the items booklet. In order to clear any confusion regarding the items booklet, brief instructions were given to the participants. After the items booklets were distributed among the participants they were asked to read carefully all instructions of the scale. The participants were asked to honestly rate the statements. Participants took 7-10 minutes on average for the booklet completion. After that they were asked to examine any missing data in the booklet. In the end, all the respondents who participated were thanked.

Results

The Statistical Package for Social Sciences (IBM-SPSS Version 23) was used to analyze data of main study by using descriptive statistics. Bivariate correlation analysis was used to find relationship between variables. To infer casual relationships between the variables regression analysis was used and to find out mean difference across demographic variables the independent sample t-test was applied. For moderation analysis process macro by Hayes (2013) 2.16 version was used.

Table 1 Reliability analysis and bivariate correlation among study variables (N = 300)

	M	S.D	Range		Skew	Kurtosis	a	1	2	3
			Potential	Actual						
1. IGD	21.42	5.85	9-45	9-37	.04	-.51	.73	-	-.301**	-.127*
2. AMI	98.74	12.21	32-160	70-139	.42	.37	.68		-	.334**
3. Age	21.46	2.75	18-35	18-29	.70	-.18				-

Note. *p<.05; **p<.01; ***p<.000 IGD= Internet gaming disorder, AMI= Achievement motivation inventory.

Table 1 denotes correlation coefficient between the study variables. Internet gaming has significant negative correlation with achievement motivation and age while achievement motivation has significant positive correlation with age. The Cronbach's alpha reliability estimates of internet gaming and achievement motivation ranged from .68 to .73 which is

acceptable as per the specified criteria by George and Mallery (2010).

Table 2 Achievement motivation predicted by internet gaming among university students (N = 300)

IV	β	DV	R^2 value	F (sig)
IGD	-.216***	AMI	.20	13.44 (.000)

Note. *p<.05; **p<.01 IGD= Internet gaming disorder, AMI= Achievement motivation Inventory

Results of table 2 revealed that internet gaming negatively predicted achievement motivation and accounted for 2% variance in achievement motivation. Results are statistically significant as the p value is less than .05.

Table 3 Mean differences on the basis of gender in the study variables (N = 300)

	Male (n=149)		Female (n=151)				95% CI		Cohen's
Variables	M	S.D	M	S.D	t (298)	p	LL	UL	d
IGD	23.91	5.14	18.96	5.47	8.07	.000	3.74	6.15	.13
AMI	94.71	11.80	102.78	11.28	-6.03	.000	-10.70	-5.44	.69

Note. IGD = Internet gaming disorder; AMI = Achievement motivation inventory; CI = confidence interval, LL = lower limit, UL = upper limit.

Table 3 represents that a significant difference exist in terms of internet gaming and achievement motivation among male and female students. Male students have more internet gaming than female students. Female students have more achievement motivation than male students. To measure the effect size of mean difference among male and female students Cohen's d was calculated. Cohen's d value of IGD = 0.13 is less than 0.2 which shows negligible effect size and the Cohen's d value of AMI = 0.69 is less than 0.8 showing large effect size (Cohen's, 1977).

Table 4 Mean differences on the basis of education in the study variables (N = 300)

	Undergraduate		Graduate/postgrad				95% CI		Cohen's
Variables	(n=127)		(n=173)		t (298)	p	LL	UL	d
	M	S.D	M	S.D					
IGD	22.93	5.79	20.30	5.66	3.93	.000	1.31	3.95	.46
AMI	96.23	9.95	100.56	13.35	-3.20	.001	-6.99	-1.67	.37

Note. IGD = Internet gaming disorder; AMI = Achievement motivation inventory; CI = confidence interval, LL = lower limit, UL = upper limit.

Table 4 represents a significant difference between undergraduate and graduate/postgraduate students in terms of internet gaming and achievement motivation. Undergraduate students have more internet gaming than graduate/postgraduate students. Graduates/postgraduate students have more achievement motivation than undergraduate students. Cohen's d was calculated to measure the effect size of mean difference among undergraduate and graduate/postgraduate students. Cohen's d value of IGD = 0.46 and AMI = 0.37 is less than 0.5 presenting medium effect size (Cohen's 1977).

Table 5 Role of gender as a moderator on the relationship between internet gaming and achievement motivation (N=300)

Varaibles	AMI		t	p
	B	S.E		
Constant	99.03 [97.56, 100.50]	0.74	132.51	.00
Gender	6.00 [3.05, 8.94]	1.49	4.01	.00
IGD	-.41 [-.66, -.16]	0.12	-3.24	.00
Gender*IGD	.22 [-.27, .72]	0.25	0.89	.37
R	.37			
R^2	.14			
F	18.93			
ΔR^2	.002			

Note. ** p<.01, * p<.05. IGD= Internet gaming disorder, AMI= Achievement motivation inventory, Gender

Table 5 illustrates role of gender as a moderator on the relationship between internet gaming and achievement motivation. Internet gaming presented the main effect to be significant (β=-.41, p<.00). It showed that internet gaming negatively predicted achievement motivation among university students. The table in addition determines that interaction occurring between internet gaming and gender is positively non-significantly predicted achievement motivation among university students. Model showed that gender does not act as a significant moderator (β=.22, p>.37) which indicated that the relationship between internet gaming and achievement motivation is not moderated by gender.

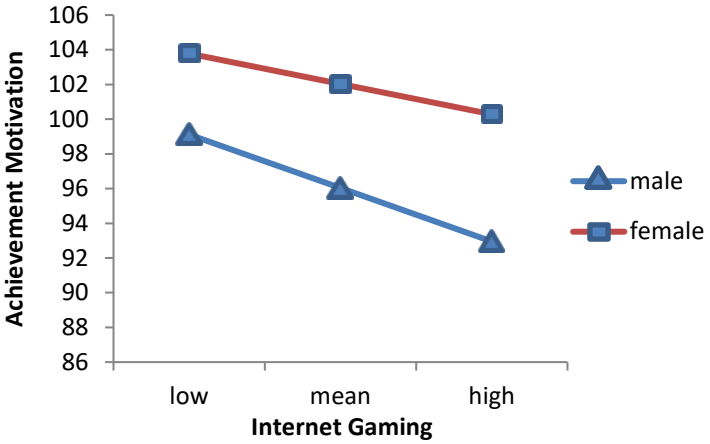

Figure 1. Gender as a moderator among the relationship between internet gaming and achievement motivation.

Figure 1 reveals that females who are less addicted to internet gaming are more likely to predisposed higher achievement motivation, as compared with males with less achievement motivation at low level of internet gaming, whereas males at high level of internet gaming are predisposed to lower achievement motivation as compared to females.

Table 6 Moderating role of education on the relationship between internet gaming and achievement motivation (N =300)

Variables	AMI		t	p
	B	S.E		
Constant	98.42 [97.11, 99.73]	0.66	148.38	.000
Education	3.03 [0.47, 5.60]	1.30	2.33	.020
IGD	-.58 [-.79, -.36]	0.10	-5.33	.000
Education*IGD	-.51 [-.93, -.09]	0.21	-2.40	.016
R	.34			
R^2	.11			
F	11.91			
ΔR^2	.014			

Note. ** p<.01, * p<.05. IGD= Internet gaming disorder, AMI= Achievement motivation inventory, Education

Table 6 illustrates role of education as a moderator on the relationship between internet gaming and achievement motivation. Internet gaming presented the main effect to be significant (β=-.58, p<.00). It showed that internet gaming negatively predicted achievement motivation among university students. The table in addition determines that interaction between internet

gaming and education is negatively significantly predicted achievement motivation among university students. Model showed that education act as a significant moderator (β=-.51, p>.01) which indicated that the relationship between internet gaming and achievement motivation is not moderated by education.

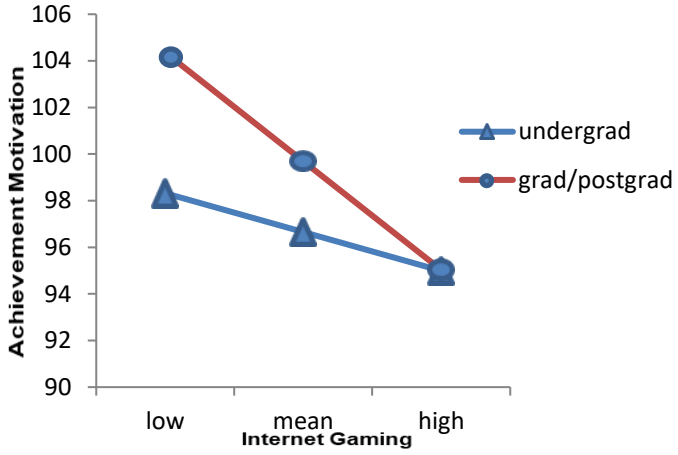

Figure 2. Education as a moderrator on relationship between internet gaming and achievement motivation.

Figure 2 reveals that internet gaming among graduates/postgraduates who are less addicted to internet gaming are more likely to predisposed higher achievement motivation, than undergraduates with low achievement motivation at low level of internet gaming, whereas undergraduates at high level of internet gaming are predisposed to lower achievement motivation as compared to graduates/postgraduates.

Discussion

The study was aimed to find out the impact the problematic internet gaming on achievement motivation with moderating role of gender and education. One of the findings of the study was to find out the impact of problematic internet gaming on achievement motivation among university students. Internet gaming has significant negative correlation with achievement motivation and age while achievement motivation has significant positive correlation with age. This proposes that individuals with internet gaming of high level will have achievement motivation of low level. The finding is similar to Sahin et al. (2016) that gaming addiction and academic achievement have negative correlation. Moreover findings through regression analysis also showed that internet gaming significantly negatively predicted achievement motivation (β=-.21, p<.00). Considering the study hypothesis literature revealed similar finding, according to a study (Choi et al., 2011) that have revealed internet addiction tendency group the achievement motivation predicts significantly lower score than the controlled group.

Another key finding of this study was to find out differences in problematic internet gaming and achievement motivation on the basis of demographics variables (i.e. gender & education) among university students. In terms of internet gaming and achievement motivation the results revealed a significant difference among females and males students. Male students have more internet gaming than female students and female students have more achievement motivation than male students. Literature shown similar findings that addiction to internet gaming will be more among males than females (Walther et al., 2012; Chou & Tsai, 2007; Hartmann & Klimmt, 2006;

Quaiser-Pohl et al., 2006; Chiu et al., 2004; Griffiths et al., 2004) and spend more time gaming on computer as compared to girls. (Festl et al., 2013; Witt et al., 2011; Chou & Tsai, 2007; Lucas & Sherry, 2004). Male adolescents are addicted towards playing games compulsively and are expected to play more games as compared to adolescent girls (Gentile, 2009; Ko et al., 2005; Chiu et al., 2004). Different behaviors are reported among girls and boys about games usage (Lee et al., 2009; Bickham et al., 2003). Studies support findings of this study that addiction to internet gaming will be more among male adolescents than female adolescents. Literature also supports other finding that female students have more achievement motivation than male students. According to a study it was found (Asmus, 1986) that female students made more inner and constant attributions than males showing more achievement motivation. This shows that male have less achievement motivation as compared to females supporting this research finding.

To look for the difference in internet gaming and achievement motivation on the basis of education among university students, this research find out that between undergraduate and graduate/postgraduate students there is significant difference in terms of internet gaming and achievement motivation. Undergraduate students have more internet gaming than graduate/postgraduate students. Graduates/postgraduate students have more achievement motivation than undergraduate students. Considering this, literature revealed similar finding that youngsters are likely to show more pathological gaming symptoms as compared with other age group's individuals (Griffiths & Wood, 2000; Ha et al., 2007; Parke et al., 2004). However a study conducted in Pakistan hypothesized that procrastination and internet addiction are associated closely among students of higher education institutes (Saleem et al., 2015). According to Zahra et al. (2019) in Pakistan revealed that the younger students (17-20 years) in playing internet games spend more time as compared to the older students (26-54 years) which is similar to our findings that students of undergraduate level are more involved in internet gaming than graduate or postgraduate students. Thus studies showed that education plays a significant role in internet gaming among university students.

Few other key findings of this study were to discover the role of gender and education as moderators on the relationship between internet gaming and achievement motivation among university students. Results indicate that gender did not work as a moderator among the relationship between internet gaming and achievement motivation. Gender has played the role of a moderator in few previous studies while few contradict. A study conducted (Teeters et al., 2015) which showed that gender worked as a moderator in relationship between gambling frequency, material gains and the expectancies of social consequences. However the findings of our study are in accordance to a research conducted by Kaczynski et al. (2008) to access whether gender can work as a moderator reported that males and females showed similar level of intensity of chronic pain. Another study conducted by Lanthier, and Windham, (2004) about usage of internet and adjustment in college with the moderating role of gender revealed that social use of internet was positively related with college adjustment while negative facets of internet were related to poor adjustment regardless of the gender. However no gender differences were found in coping and protective parenting and disability which shows that gender did not moderate the relationship among them.

Other key finding was the role of education as a moderator on the relationship between internet gaming and achievement motivation among university students. The results showed that among the relationship between internet gaming and achievement motivation among university students the

education acts as a negative significant moderator. Similar findings of education as a moderator was reported in a Pakistani study by Ahmed and Yaseen, (2018) which revealed that education has a negative significant moderating impact on customer focus management and non-business strategies.

Limitations and Suggestions for Future Researches

The present study limitations were discussed with few suggestions for future researchers. The current study sample was collected only form two cities; Rawalpindi and Islamabad. In future, selecting sample from other cities of Pakistan would be more suitable. Age group was also limited to university students so in future other age groups should also be added. The current study was correlation and cross-sectional research design was used, for future studies longitudinal research can be conducted on the topics of internet gaming disorder and achievement motivation by which can have more comparability in the study and can help produce rich data.

More limitation of the study which can be prejudiced includes the use of self-reported information for analysis. To get more broad and detailed picture of the phenomena interview method can also be used.

Implications

Excessive use of internet gaming could effects student's performance in academic by decreasing their study hours. Therefore for better performance in academic and in order to have a balanced personal, psychological and social life it is essential for people to have more understanding about how internet gaming could be the cause of their decreased achievement motivation.

With the help of this research we can psycho-educate teaching institutions like colleges and universities also families and social support groups for arranging programs related to awareness and to enhance student's performance training programs could be arranged by clinicians to form intervention and design training to increase the level of awareness among students and help them come out of the gaming world and making them more adjusted in social environment. Research on internet gaming is limited in Pakistan. The current research will form comprehension of the phenomena locally and will provide base for future researches to determine further more reasons and consequences of pathological internet gaming. Parents can also be helped by the findings of this research to comprehend in a better way the underlying sources of internet gaming children might have developed and could manage their children's pathological gaming behavior. Secondly the psychological needs of adolescents for achievement and socializing can be fulfilled by engaging them more in outdoor games/activities and making their interactions more in friends and family gatherings, by which they will learn socialize and achieve in real world rather than the gaming world.

Conclusion

The present study was carried to examine problematic internet gaming and achievement motivation among university students with moderating role of gender and education. The strong empirical support was provided by the findings of this present study for the predicting role of problematic internet gaming and achievement motivation. Internet gaming is significantly negatively related to achievement motivation among university students. The current study has also found the role of gender and education as a moderator the results of which revealed that in the relationship between problematic internet gaming and achievement motivation, education worked as a negative significant moderator. Also problematic internet gaming was found to be more in male students as

compared to female students and undergraduate students are more addicted to internet gaming than graduate and postgraduate students.

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